

What is claimed is:

1 1. A virtual stream (VS) in a basic service set (BSS) in a wireless network, the
2 virtual stream comprising: a unidirectional path in the wireless network between a station
3 sourcing a quality of service (QoS) session and at least one station receiving the QoS session
4 in the same BSS.

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1 2. The VS according to claim 1, wherein the unidirectional path is defined by a
2 VS identifier (VSID), an address of the sourcing station, and an address of the at least one
3 receiving station.

4 3. The VS according to claim 2, wherein the VSID is unique within, and local
2 to, the BSS.

1 4. The VS according to claim 1, wherein the VS exists solely within a medium
2 access control (MAC) sublayer of the wireless network.

1 5. The VS according to claim 1, wherein the VS is set up by a QoS management
2 entity (QME) within a point coordinator (PC) station of the BSS to transport, under at least
3 one predetermined QoS constraint, a traffic of the QoS session from a local logical link
4 control (LLC) entity to at least one peer LLC entity in the same BSS.

6. The VS according to claim 5, wherein the VS is torn down by the QME of the PC-station upon termination of the QoS session.

7. The VS according to claim 5, wherein the QME of the PC-station reserves an associated resource of the BSS for the VS set up for the QoS session.

8. The VS according to claim 6, wherein the QME of the PC-station releases an associated resource of the BSS reserved for the VS torn down at termination of the QoS session.

9. The VS according to claim 7, wherein the reserved resource is a predetermined bandwidth of a communication link of the BSS.

10. The VS according to claim 1, wherein the VS is a virtual down-stream (VDS), wherein the station sourcing the QoS session is a PC-station of the BSS, and wherein the at least one station receiving the QoS session is at least one non-PC station of the BSS.

11. The VS according to claim 1, wherein the VS is a virtual up-stream (VUS), wherein the station sourcing the QoS session is a non-PC station of the BSS, and

4 wherein the one station receiving the QoS session is the PC station of the BSS.

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1 12. The VS according to claim 1, wherein the VS is a virtual side-stream (VSS),
2 wherein the station sourcing the QoS session is a non-PC station of the BSS,
3 and

4 wherein the at least one station receiving the QoS session is a non-PC station of the BSS.

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1 13. The VS according to claim 1, wherein the VS is a unitcast VS,
2 wherein the station sourcing the QoS session is one of a PC-station and a non-PC station of
3 the BSS, and

4 wherein the at least one station receiving the QoS session is one of a PC-
5 station and a non-PC station of the BSS.

1 14. The VS according to claim 1, wherein the VS is a multicast VS,
2 wherein the station sourcing the QoS session is one of a PC-station and a non-PC station of
3 the BSS, and

4 wherein a plurality of stations of the same BSS receive the QoS session.

1 15. The VS according to claim 1, wherein the QoS session includes at least one
2 data frame, and

3 wherein the station sourcing the QoS session includes a frame classification

4 entity (FCE) that labels each data frame of the QoS session with the VSID, the VSID being
5 associated with at least one QoS parameter value for the QoS session.

1 16. The VS according to claim 15, wherein the at least one QoS parameter value
2 is at least one of an acknowledgment policy, a flow type, a priority level, a privacy level, a
3 delay bound, a jitter bound, a minimum data rate, a mean data rate, and a maximum data
4 burst.

1 17. The VS according to claim 16, wherein the flow type is one of a continuous
2 flow type and a discontinuous flow type.

1 18. The VS according to claim 17, wherein the continuous flow type is related to
2 a periodic source.

1 19. The VS according to claim 18, wherein the periodic source is a speech source.

1 20. The VS according to claim 18, wherein the periodic source is a video source.

1 21. The VS according to claim 17, wherein the discontinuous flow type is related
2 to a bursty source.

1 22. The VS according to claim 21, wherein the bursty source is a data source.

1 23. The VS according to claim 16, wherein the mean data rate is related to a token
2 rate of a token bucket, and

3 wherein the maximum data burst is related to a bucket size of the token
4 bucket.

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1 24. The VS according to claim 1, wherein the wireless network is a wireless local
2 area network (WLAN).

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